

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
6 October 2005 (06.10.2005)

PCT

(10) International Publication Number  
**WO 2005/092610 A1**

(51) International Patent Classification<sup>7</sup>: **B32B 19/00, 9/00**

(21) International Application Number:

PCT/US2004/012965

(22) International Filing Date: 28 April 2004 (28.04.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

60/466,556 28 April 2003 (28.04.2003) US

(71) Applicant (for all designated States except US): **DREXEL UNIVERSITY** [US/US]; 32nd and Chestnut Streets, Philadelphia, PA 19104 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **GOGOTSI, Yury** [UA/US]; 33 Sandtrap Circle, Ivyland, PA 18974 (US). **MCNALLAN, Michael, J.** [US/US]; 309 N. Elmwood Avenue, Oak Park, IL 60302 (US).

(74) Agents: **LICATA, Jane, Massey et al.**; Licata & Tyrell P.C., 66 E. Main Street, Marlton, NJ 08053 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

**Published:**

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: BORON NITRIDE-ALUMINUM (BAN) INTERFACES AND COATINGS AND METHODS FOR THEIR PRODUCTION AND USE

(57) Abstract: Boron-aluminum-nitride interface compositions and coatings for ceramic fibers used in ceramic matrix composites are provided. Also provided are methods for production of boron-nitride ceramic fibers.